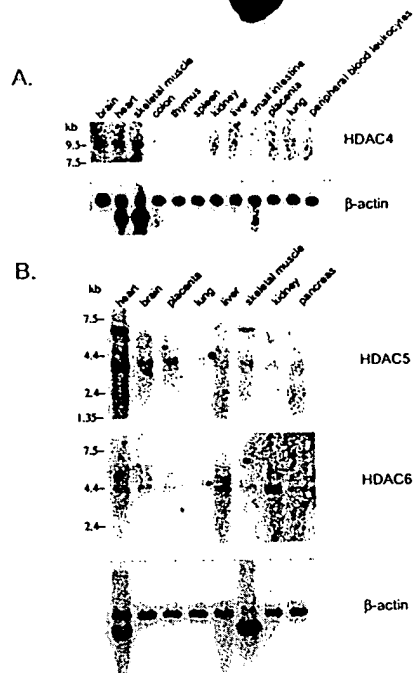


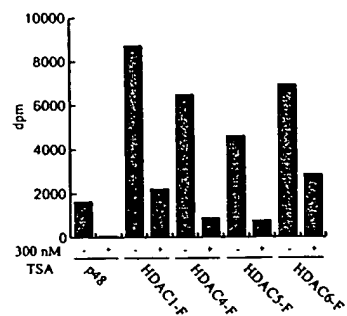
Figure 2



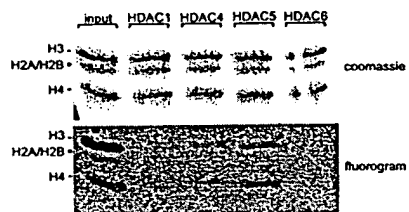
03050187-03050187

Figure 3

A.



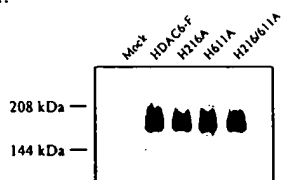
B.



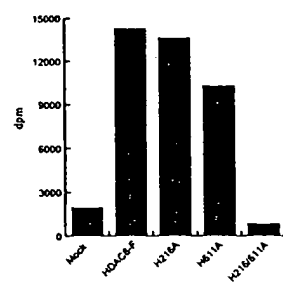
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Figure 4

A.

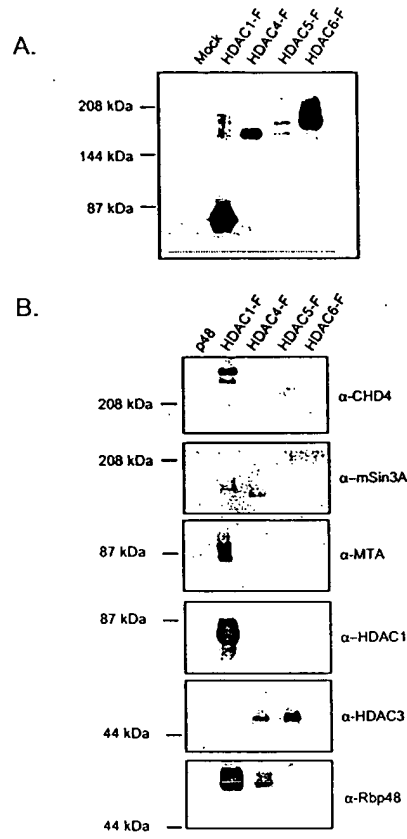


B.



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Figure 5



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Figure 6

A.

HOMOLOGY REGIONS	INITIAL AA IN HDAC1	CONSENSUS SEQUENCES		EXCEPTIONS
1	99	D (C/T) P (V/I) F N/A	CLASS I CLASS II	
2	134	M X X G G X H H A R P P G H H A	CLASS I CLASS II	Hos3p ends in C, AcaC ends in G
3	148	S G (F/Y) C X X N G (F/Y) C X X N	CLASS I CLASS II	Hda1 ends in S
4	174	D x D x H H G D G V (D/E) D x D x H H G X G T Q	CLASS I CLASS II	
5	193	V X T X S H V X (Y/F) S X H	CLASS I CLASS II	
6	225	N x P (M/L) X D G I D D X (S/T) Y N/A	CLASS I CLASS II	Hos1p has instead: M x P L K H G C D D N Y
7	298	x G G G G Y x E G G (Y/M)	CLASS I CLASS II	

B.

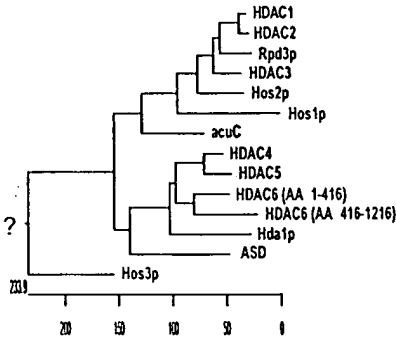


Figure 7

Figure 7A

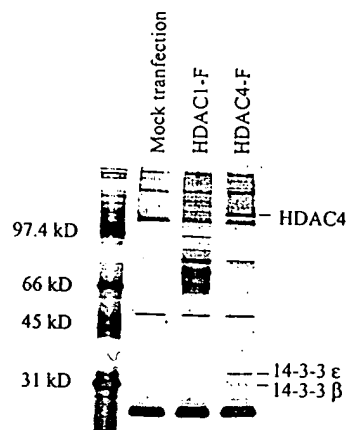


Figure 7B

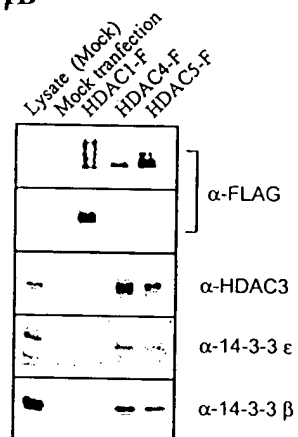


Figure 8

Figure 8A

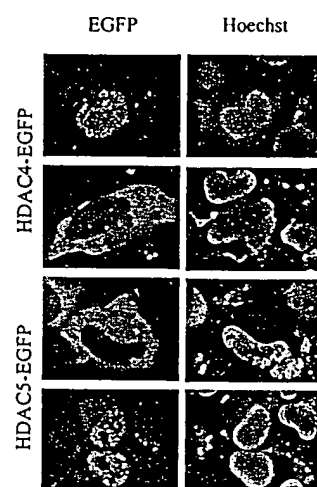


Figure 8B

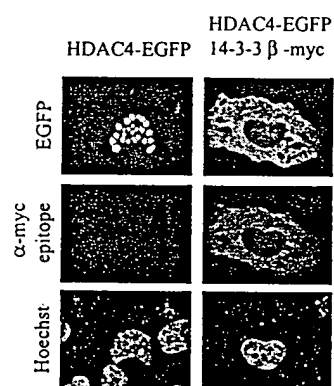


Figure 9

Figure 9A

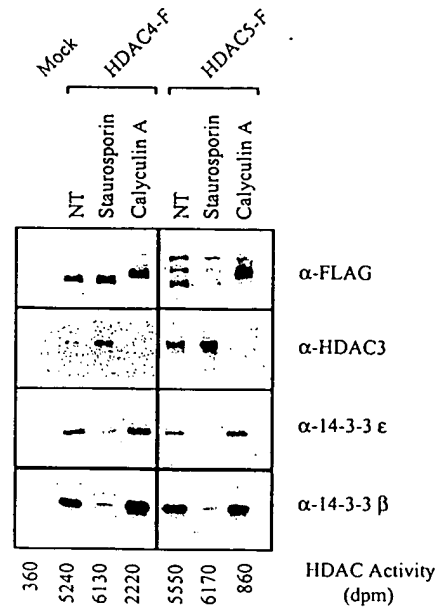


Figure 9B

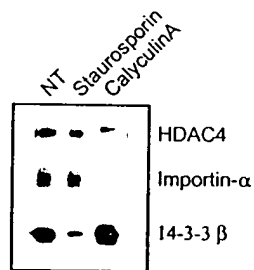
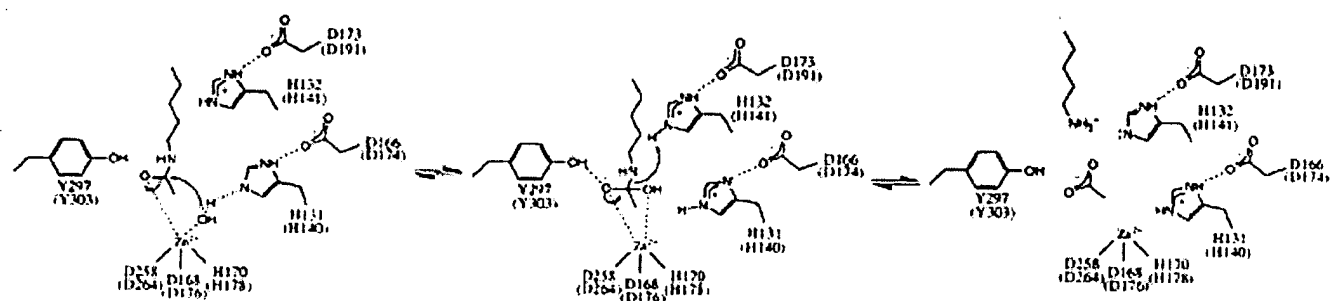
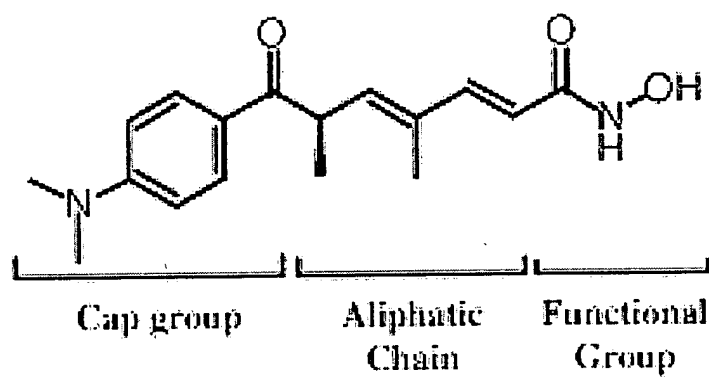


Figure 11



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Figure 12



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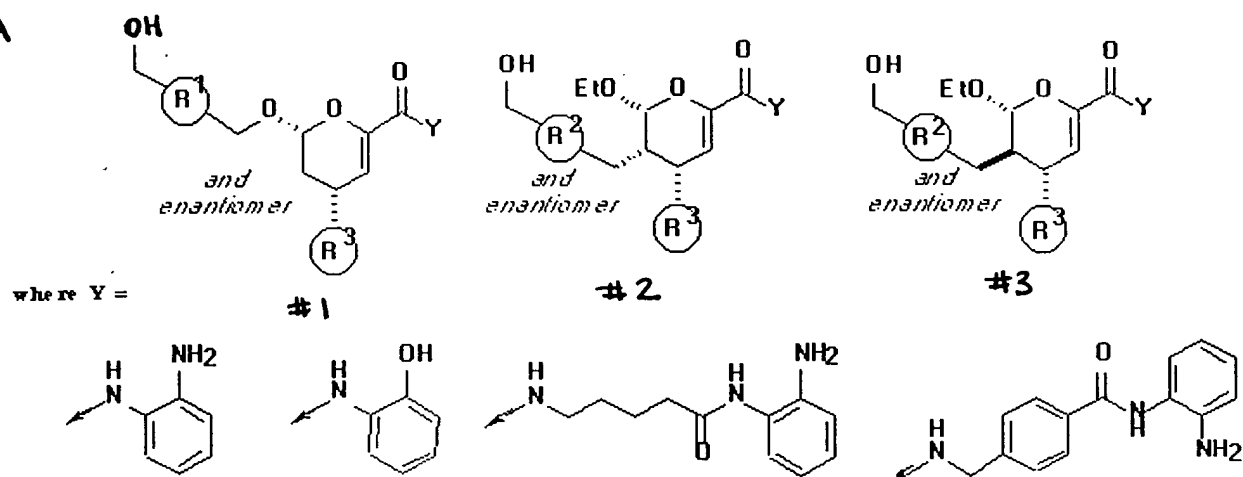
Figure 13

		Residues on rim of channel					Residues in channel				
		E72	*	Y91	*	Y91	G130	G141	*	E108	E265
Class I	HDLP	P	I	G	G	Y	E	N	P		Y
	HDAC1	P	N	G	-	E	D	C	P		R
	HDAC2	P	N	G	-	E	D	C	P		R
	HDAC3	P	N	G	-	D	D	C	P		R
	HDAC4	A	K	G	-	Y	D	C	P		P
Class II	HDAC5	P	I	G	V	D	S	D	T		P
	HDAC6(a)	P	I	-	-	-	D	S			P
	HDAC6(b)	P	I	-	-	-	D	S			P
	HDAC7	P	I	G	V	D	T	D	T		P
Class I	HDLP	H	G	F			E	-	Y	A	F
	HDAC1	S	G	F			E	-	Y	F	-
	HDAC2	S	G	F			E	-	Y	F	-
	HDAC3	S	G	F			N	-	Y	F	-
	HDAC4	S	G	F			P	-	G	F	-
Class II	HDAC5	H	G	F			D	G	N	F	F
	HDAC6(a)	D	G	Y			Q	G	R	F	N
	HDAC6(b)	C	G	F			H	G	T	F	F
	HDAC7	H	G	F			D	G	N	F	F

		Residues in active site									
		***	*	H131	H132	*	D166	D168	H170	*	D258
Class I	HDLP	P	A	G	G	N	H	H	A		T
	HDAC1	W	A	G	G	L	H	H	A		S
	HDAC2	W	A	G	G	L	H	H	A		A
	HDAC3	W	A	G	G	L	H	H	A		A
	HDAC4	W	A	G	G	L	H	H	A		A
Class II	HDAC5	R	P	P	G	-	H	H	A		F
	HDAC6(a)	R	P	P	G	-	H	H	A		F
	HDAC6(b)	R	P	P	G	-	H	H	A		F
	HDAC7	R	P	P	G	-	H	H	A		F

Figure 14

14A



(4 R¹ groups + 2 R² groups) \leftrightarrow 10 R³ groups \leftrightarrow 2 (enantiomers) \leftrightarrow 4 amines = 640 compounds

14B

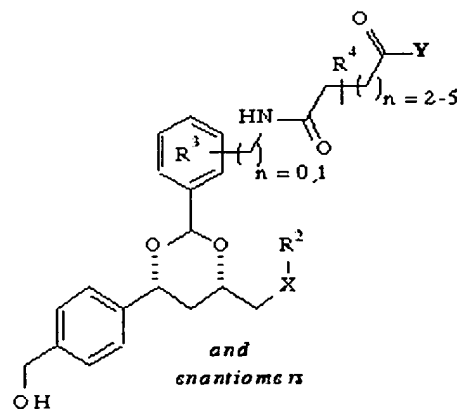
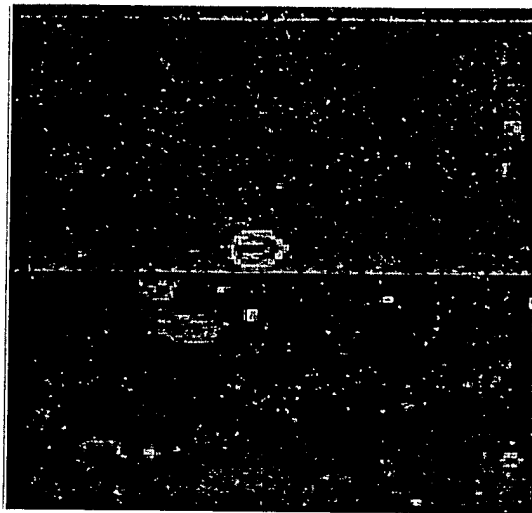
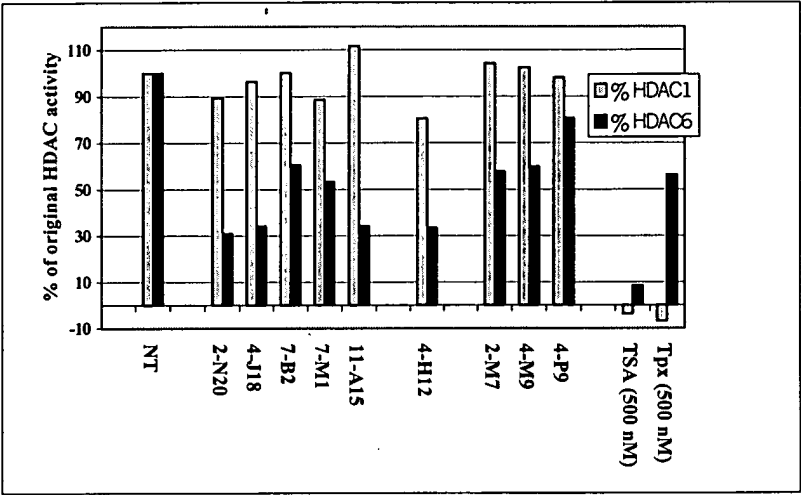


Figure 15



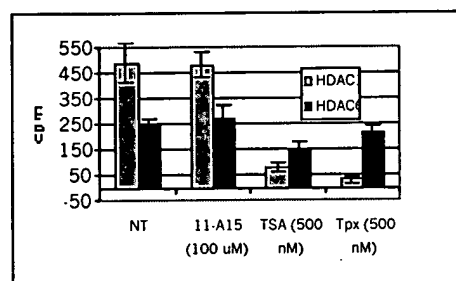
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Figure 16



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Figure 17



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